CITY OF DUBLIN

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Attic Ventilation

Purpose

Enclosed attics and enclosed rafters are required by the California Residential Code to have proper ventilation. This handout is intended to provide the information regarding proper roof ventilation and insulation clearance.

Roof Ventilation Requirements

Enclosed attics and enclosed rafters spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings:

- Protected against the entrance of rain or snow;
- Shall have dimension of at least $^{1}/_{16}$ inch minimum and ¼ inch maximum;
- Dimension larger than ¼ inch shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of $^{1/16}$ inch minimum and ¼ inch maximum.
- Openings in roof framings must conform to the requirements of Section 802.7 in the 2013 CRC (cutting and notching structural roof members).

Minimum Area

The minimum net free ventilation area shall be $^{1}/_{150}$ of the area of the vented space.

Exception: The minimum net free ventilation area shall be $^{1}/_{300}$ of the vented space provided one or more of the following conditions are met:

At least 40% and not more than 50% of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located no more than 3 feet below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet below the ridge or highest point of the space shall be permitted.

Vent and Insulation Clearance

Where eave or cornice vents are installed, insulation shall not block the free flow of air. A minimum of a 1-inch space shall be provided between the insulation and the roof sheathing and at the location of the vent.

Attic Access

Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that:

- Exceed 30 square feet and
- Have vertical height of 30 inches or more
  - Vertical height must be measured from the top of the ceiling framing members to the underside of the roof framing members.

Rough-framed opening:

- Shall not be less than 22-inches by 30-inches
- Shall be located in hallway or readily accessible location

When located in a wall:

- Opening shall be minimum of 22-inches wide by 30-inches high

When located in ceiling:

- Minimum unobstructed headroom in the attic space shall be 30-inches at some point above the ceiling measured vertically from bottom of ceiling framing members.

Ventilation Calculation Example

a. Ventilated Attic Area _____ ft^2 ÷ 150 = _____ ft^2 required ventilation

b. _____ ft^2 required ventilation **x** 144 = _____in^2
(From above) (Convert to Sq. In)

c. Vents _____ in^2 **x** _____ = _____ in^2 (_____)
(**N**et **F**ree **A**rea per vent) (Quantity) (Total) (Req. from above)

"**N**et **F**ree **A**rea" - Provided by ventilation product manufacturers